signals; and

a control unit for selectively controlling said multi-signal generator center frequency.

Remarks

Applicant makes of record a telephonic interview with the Examiner on 28 August 2003 with Examiners Urban and Chow regarding the outstanding Office Action. Independent Claims 13 and 17 were found to be allowable and mutually satisfactory language for Claim 1 was determined. Applicant amends claims 1 to expedite the prosecution of the present application and to conform the claim to the mutually agreed language. Applicant continues arguments made previously to distinguish the present invention and believes that all independent and dependent claims are now in allowable form.

Applicant, having amended claim 1 to more clearly claim the present invention and to expedite the prosecution, and having overcome the rejections to the present patent Application, believes that the present application is in condition for allowance. Applicant respectfully requests reconsideration and allowance of the present application. The Examiner is requested to call the Applicant's undersigned attorney after initial review of this Amendment to expedite prosecution of the present application.

Respectfully submitted,
George F. Derome, et al.

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Serial No.:09/382,763
Filed: 25 August 1999
Group Art Unit: 2736

Date: 25 August 2003
Docket No.: ADIC-1

In re application of: George F. Derome et al
Serial No. 09/382,763
Filed: 25 August 1999

For: DUAL-MODE TRANSMITTER

THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C 20231

Sir:

Transmitted herewith is an amendment in the above-identified application. The following items checked below are applicable.

[ ] A Petition for Extension of Time for __ months is hereby made, under provisions of §1.136(a), and a check in the amount of $ 00.00 is enclosed according to §1.17.

[ ] _____ is hereby appointed Associate Attorney by:

Attorney of Record: Stephen G. Matzuk
Registration No.: 29,328

[ ] Other:

[X] No additional fee is required. [ ] The filing fee has been calculated as shown below and a check in the amount of $ .00 is enclosed.

	(Col. 1) Claims After Amendment		(Col.2) Highest No. Previously Paid For		(Col.3) Present Extra	SMALL ENTITY*** Rate	Add'l Fee	OR	OTHER THAN A SMALL ENTITY Rate	Add'l Fee
TOTAL CLAIMS	22	MINUS	22	=	0	X09 =	$		X18	$
INDEP. CLAIMS	3	MINUS	3	=	0	X42 =	$		X84	$
[ ] FIRST PRESENTATION OF MULTIPLE DEPENDANT CLAIMS PRESENTED						+140	$ 0		+280	$
* Appl. Base TOTAL = 20										
** Appl. Base INDEPENDENT = 3						TOTAL	$ 0		TOTAL	$
*** Small Entity form previously submitted										

[x] In the event a Petition for Extension of Time is required by this paper and not otherwise provided, such Petition is hereby made and authorization is provided herewith to charge Deposit Account No. 13-2189 for the cost of such extension.

[x] The Commissioner is hereby authorized to charge payment of any additional filing fees under 37 CFR 1.16 or 1.17 associated with this communication or credit any overpayment to Deposit Account No. 13-2189.

~~Triplicate copies of this sheet are attached.~~

I hereby certify that this correspondence is being filed with the United States Patent Office via FAX to 703 746 5784, attention examiner Chow, on 25 Aug 03

By Stephen G. Matzuk
Attorney of Record: Stephen G. Matzuk
Registration No.: 29,328

1. (presently amended) A transmitter, comprising:

a multi-signal generator for simultaneously providing a plurality of signals within a portion of a selected frequency band and having a center frequency and relative frequency spacing of said simultaneous plurality of signals, wherein

said multi-signal generator is a variable multi-signal generator for ~~center frequency is~~ selectively adjusting said center frequency ~~adjusted~~ to cause said plurality of signals to cover a differing portions ~~corresponding selected portion~~ of the selected frequency band;

a modulator connected to said multi-signal generator for selectively and simultaneously modulating said plurality of signals; and

a control unit for selectively controlling said multi-signal generator center frequency.

2. (original) The transmitter of claim 1, wherein said multi-signal generator further includes a wave memory for reproducing a selected waveform output signal providing said plurality of signals.

3. (original) The transmitter of claim 2, wherein said wave memory output signal comprises a plurality of signals corresponding to a different portion of said selected band.

4. (original) The transmitter of claim 3, wherein said control

unit provides prestored waveforms selectively transferred to said wave memory to provide said plurality of signals on a corresponding portion of said selected band.

5.(original) The transmitter of claim 2, further including a waveform converter connected to receive said reproduced selected waveform output signal and provide a converted output signal.

6.(original) The transmitter of claim 5, further including an audio source comprising one of an audio memory for providing a prestored audio signal selected by said control unit, and a microphone, said audio source being selectively connected to said converter to therein amplitude modulate the waveform output signal.

Cl cont.

7.(original) The transmitter of claim 2, further including a programmable signal generator providing a programmable output signal and a mixer receiving said programmable output signal and said converted output signal and providing a mixer output therefrom, wherein said programmable output signal is selectively varied to provide a plurality of signals at different portions of a selected band.

8.(original) The transmitter of claim 7, wherein said programmable signal generator is controlled by said control unit to selectively provide different output signals, which when received by said mixer, provides said plurality of signals corresponding to substantially all of said selected frequency band.

9.(original) The transmitter of claim 8 further including a frequency modulator connected to said programmable signal generator for frequency modulating the output signal thereof according to an audio signal.

10.(original) The transmitter of claim 9 further including an audio source comprising one of an audio memory for providing a prestored audio signal selected by said control unit, and a microphone, said audio source being selectively connected to said frequency modulator to modulate programmable signal generator output signal.

C cont

11.(original) The transmitter of claim 10, further including an audio source comprising one of an audio memory for providing a prestored audio signal selected by said control unit, and a microphone, said audio source being selectively connected to said frequency modulator.

12.(original) The transmitter of claim 7, further including a power amplifier selectively receiving from one of said mixer output signal and said converted signal, and providing a transmitter output signal.

13.(amended) A dual-mode transmitter, comprising:

a first signal generator for simultaneously providing a

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plurality of carrier signals within a frequency band and having a relative frequency spacing, and including an amplitude modulator of said plurality of said plurality of signals according to a modulation signal;

a second signal generator for selectively providing a selectable frequency signal, and including a frequency modulator of said selectable frequency according to a modulation signal;

a mixer receiving the output signals of said first and second signal generators, and providing an output signal;

a power amplifier for selectively receiving said signals corresponding to said plurality of signals from said first signal generator and said mixer output signal, providing a signal to an antenna according to said selectively received signal; and

a control means for selectably enabling said first signal amplitude modulator in a first mode, and said second signal generator frequency modulator in a second mode.

14.(original) The transmitter of claim 13, further comprising an audio source comprising one of an audio memory for providing a prestored audio signal selected by said control unit, and a microphone, said audio source being selectively connected to said amplitude modulator and said frequency modulator.

15.(original) The transmitter of claim 13, wherein said first signal generator comprises means for providing a plurality of signals in selected portions of said frequency band according to said control unit wherein said selected portions substantially comprise said frequency band.

16.(original) The transmitter of claim 13, wherein said first signal generator comprises means for providing a plurality of signals in at least one selected portion of said frequency band according to said control unit, and

said second signal generator provides said selectable frequency signal according to said control unit,

wherein said mixer output signals comprise selected portions which substantially comprise said frequency band.

Cl Cont

17.(original) A method of providing simultaneous multi-carrier transmission, comprising the steps of:

selecting a set of carrier frequencies;

providing a corresponding sum of sine wave signals each corresponding to one of the set of carrier frequencies;

dividing the sum into a number of segments in the time domain;

calculating a variance of the magnitudes of each said segment;

changing the phase relationship of said sine wave signals to minimize the variance;

repeating the steps of calculating and changing until the minimization of the variance from said changes is less than a desired threshold significance value; and

transmitting a signal corresponding to said sum of said sine wave signals.

18.(original) The method of claim 17, wherein said step of changing comprises the step of randomly changing the phase relationship of said sine wave signals.

19.(original) The method of claim 17, wherein said step of selecting a set of carrier frequencies comprises the step of selecting a set of carrier frequencies corresponding to allocated broadcast channels within a selected broadcast band.

Cl cont.

20.(original) The method of claim 19, wherein said selected broadcast band comprises at least one of commercial AM and FM broadcast band.

21.(original) The method of claim 17, further including the step of modulating said signal corresponding to the sum of said sine wave signals.

22.(original) The method of claim 17, further including the step of frequency translating said signal corresponding to the sum of said sine wave signals into at least a portion of a selected broadcast band.

08/25/2003 16:12 FROM 603 228 0611 TO 17037465784 P.01

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FAX MESSAGE

TO: EX C CHOW

FAX NUMBER DIALED: ~~1~~ 703 746 5784

DATE: 25 Aug 03

TOTAL PAGES: 10 (with this half-page)

FROM: STEVE MATZUK

MESSAGE:

SUPPLEMENTAL AMENDMENT in Re 09/382,783 DUAL-MODE TRANSMITTER
Per Discussions w/ EX CHOW + URBAN

QUESTION: DO I NEED TO ALSO FAX TO 703 872 9314
OR OTHERWISE FILE W/ PTO?

REPLY REQUESTED YES X NO___ CONFIRM RECEIPT YES X NO___

Received from < 603 228 0611 > at 8/25/03 4:11:45 PM [Eastern Daylight Time]